

# JAVA INSTITUTE FOR ADVANCED TECHNOLOGY

## Department of Examinations



COURSE(S) – (LEADING TO)	PROFESSIONAL DIPLOMA IN SOFTWARE ENGINEERING
UNIT NAME	OBJECT ORIENTED SYSTEMS ANALYSIS AND DESIGN
UNIT ID	H7DV 04
ASSIGNMENT ID	H7DV 04/EX/01
RESEARCH NAME	OOSAD – FINAL THEORETICAL EXAMINATION
DESCRIPTION	CANDIDATES ARE REQUIRED TO CONDUCT A RESEARCH IN OVERALL CONTENT OF THE SUBJECT INCLUDING SDLC, REGURMENT GATHERING TECHNIQUES, MODELING CONCEPTS AND SRS DOCUMENTS.
DURATION	1 WEEK
WORD COUNT	1500 - 2000
SUBMISSION VIA	ONLINE (STUDENT PORTAL)
DOCUMENT FORMAT	MICROSOFT WORD OFFICE DOCUMENT

### GUIDE LINES FOR CANDIDATES

- Students are expected to use reference books, the Internet, journals and other similar sources in order to accomplish the task specified above.
- Answer all questions.
- Maximum marks attainable for this paper is 100.
- Students are expected to refrain from repeating any content in their research document.
- Students will be penalised for any plagiarism.

NAME	:	..... (BLOCK CAPITALS)
ADMISSION NO	:	.....
NIC NO	:	.....

# RESEARCH ON OBJECT ORIENTED SYSTEM ANALYSIS AND DESIGN

We have now covered many different concepts relating to Object Oriented System Analysis and Design over the course of this unit, from individual methods and techniques to organization wide strategies and practices. The purpose of this assignment is for you to apply what you have learned plus additional knowledge issue that you are acquainted with.

## Question 01

- 1) Define a system with an example. (4 marks)
- 2) Identify and describe system development life cycle and briefly discuss all the phases. (10 marks)
- 3) Explain about DA,DBA and End user of the Software Team with job responsibilities.(6 marks)

## Question 02

- 1) Explain one of the following system development methodologies covering their Basic Principles, Weaknesses, Strengths, Most appropriate and least appropriate situations.
  - a. Waterfall
  - b. Spiral
  - c. Agile
  - d. SCRUM (20 marks)

## Question 03

- 1) List down and explain all requirements gathering techniques. (20 marks)

## Question 04

- 1) Draw a use case diagram including system boundary for Bank management system. (10 marks)
- 2) Draw a flowchart for ATM withdrawal process.. (10 marks)

## Question 05

- 1) Provide simple code examples and Explain the following concepts in object orientation. (20 marks)
  - a. Is-A
  - b. Has-A
  - c. Encapsulation
  - d. Polymorphism

**You will be marked on:**

Question	Minimum word count	Marks
Question 01	250	20
Question 02	250	12
Question 03	250	20
Question 04	250	20
Question 05	250	20
References	15 References	8

**Learning Outcomes:**

LO 1. Identify and describe what a system is, steps of the system development life cycle, roles of a system development team and system development methodologies.

LO 2. Use software requirement gathering techniques to analyses and identify system requirements.

LO 3. Describe the most essential Object-Oriented Programming Principles.

LO 4. Describe and apply Object Oriented Designing and Modelling techniques (using Unified Modelling Language).

LO 5. Develop a System Requirement Specification (SRS) to a given scenario.

**Font size, style, and type:**

- The font must be a standard style that is clear and readable. Script, cursive, and pictorial fonts are prohibited.
- All document text with the exception of items embedded in figures must be black.
- Font size should be 11 or 12 points.
- Font style “Times New Roman”.
- Italicized fonts are only accepted where allowed or required by your chosen style guide
- Font size and font type must be consistent throughout the text.
- Chapter titles and sections can be a larger font size than the standard text, if in accordance with the student’s approved style guide and advisory committee. This style decision must be applied consistently throughout the text.
- The font size of tables and figures can be smaller than the standard text if in accordance with the student’s style guide and advisory committee. This style decision must be applied consistently throughout the text. Font cannot be at less than 8 points to allow for readability.
- The spacing must be a 1.15 spaces after each line.
- The Margins spaces on the sides of, and on the top and bottom.